



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,508	03/26/2004	Makoto Yoshida	2004_0438A	8593

513 7590 03/22/2005

WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER

MILLER, PATRICK L

ART UNIT	PAPER NUMBER
----------	--------------

2837

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/809,508

Applicant(s)

YOSHIDA ET AL.

Examiner

Patrick Miller

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>03262004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. Since the specification describes these figures as "conventional," Figures 21 and 22 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The abstract of the disclosure is objected to because see bullet(s) below. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Art Unit: 2837

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

3. The disclosure is objected to because of the following informalities: see bullet(s) below.

Appropriate correction is required.

- On page 9 of the specification, in reference to Figures 21 and 22, change “conventional” to “Prior Art.”

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.
 - For example:
 - Claim 1 recites, “the motor is advanced *uniquely*” (emphasis added).
 - Claim 1 recites “amotor.”
 - Change rpm to “revolutions per minute (rpm).”

- NOTE: This list is not exhaustive.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4, and 5 are rejected, as best understood by the Examiner, under 35

U.S.C. 102(b) as being anticipated by Kitamine et al (6,034,494).

- With respect to claims 1 and 2, Kitamine et al disclose a driver for a compressor motor (col. 1, l. 67), where the driver advances the phase current phase at startup, then reduces the phase advance once the motor is at an operating level (col. 5, ll. 23-45; phase difference between real phase and driving phase at startup, upon reaching a steady-state, the microcomputer controls the duty cycle to reduce the phase difference).
- With respect to claim 4, the driver switches a dc power source that supplies a dc voltage that is transformed to an AC sinusoidal wave for input to a brushless dc motor (Fig. 1, dc power from #9 is “inverted” to 3-phase ac power by pulse width modulation); and the driver detects current flowing through a stator winding to determine the position of the motor rotor (Fig. 1, detected current input to #4 provides rotor position information).
- With respect to claim 5, the switching is done using three-phase modulation (col. 2, ll. 15-16).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6, 7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamine et al (6,034,494) as applied to claims 1, 2, 4, and 5 above.

- With respect to claims 6, 7, 9, and 10, Kitamine et al disclose the motor driver being used to drive an air conditioner (col. 3, ll. 39-40), but do not disclose the air conditioner being mounted in a car. With respect to this feature, the Examiner takes Official Notice. It would have been obvious to one having ordinary skill in the art at the time of the invention to mount the air conditioner driver of Kitamine et al in a car because the driver of Kitamine et al allows for a smooth transition from startup to steady-state control, which provides the advantage of preventing the motor, and subsequently the air conditioner from stopping due to loss of synchronization.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamine et al (6,034,494) as applied to claim 1 above, and further in view of Heeren et al (6,078,158).

- With respect to claim 3, Kitamine et al do not disclose the driver drawing maximum torque based on the phase advancement.
- Heeren et al disclose phase advancement at startup to generate maximum torque (col. 3, ll. 7-32). The motivation to generate maximum torque at startup is to decrease spin-up time (col. 4, ll. 1-5).

Art Unit: 2837

- Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to phase advance the system of Kitamine et al so that maximum torque is generated at startup, thereby providing the advantage of decreasing spin-up time, as taught by Heeren et al.
8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamine et al and Heeren et al as applied to claims 1 and 3 above.
- With respect to claim 8, Kitamine et al disclose the motor driver being used to drive an air conditioner (col. 3, ll. 39-40), but do not disclose the air conditioner being mounted in a car. With respect to this feature, the Examiner takes Official Notice. It would have been obvious to one having ordinary skill in the art at the time of the invention to mount the air conditioner driver of Kitamine et al and Heeren et al in a car because the driver of Kitamine et al allows for a smooth transition from startup to steady-state control, which provides the advantage of preventing the motor, and subsequently the air conditioner from stopping due to loss of synchronization.

Art Unit: 2837

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Miller whose telephone number is 571-272-2070. The examiner can normally be reached on M-F, 8:30-5:30.

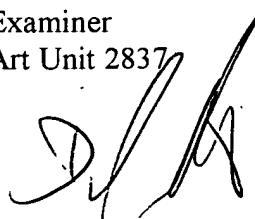
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2800 ext 41. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick Miller
Examiner
Art Unit 2837



DAVID MARTIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

pm
March 21, 2005